

IN THE CLAIMS:

1. (Currently Amended) A fuel injector for metering, atomizing, and spray targeting fuel, the fuel injector comprising:

a seat including a passage extending along a longitudinal axis;

a movable member cooperating with the seat to permit and prevent a flow of fuel through the passage; and

an orifice plate including:

a member including first and second generally parallel surfaces, the first surface generally confront the valve seat, and the second surface facing opposite the first surface; and

an orifice, having longitudinal axis, penetrating the member and being defined by a wall coupling the first and second surfaces, the wall including:

a first portion extending from the first surface, the first portion of the wall extending at a first oblique angle with respect to the first surface, the first oblique angle defining a an asymmetrical chamfer asymmetrical about the longitudinal axis of the orifice; and

a second portion extending between the first portion and the second surface, the second portion of the wall being in direct communication with the first portion and defining a cylinder extending along an axis at a second oblique angle with respect to the second surface, such that fuel which enters the first portion at the first surface can flow through the first portion directly into the second portion and exit the second portion at the second surface,

a perimeter being defined by the cylinder as an abutment of the first and second portions, the perimeter lying in a plane that is oblique with respect to the first surface.

2. (Canceled)

3. (Previously Presented) The fuel injector according to claim 1, wherein at least a portion of the perimeter is contiguous with the first surface.

4. (Previously Presented) The fuel injector according to claim 1, wherein the first oblique angle is within a range of oblique angles with respect to the orifice axis.

5. (Canceled)

6. (Previously Presented) The fuel injector according to claim ~~4~~ 5, wherein the first oblique angle is in a first range between 25 to 30 degrees relative to the longitudinal axis and the second oblique angle is in a second range between 3 and 10 degrees relative to the longitudinal axis.

7. (Currently Amended) An orifice plate for a fuel injector including a passage extending between an inlet and an outlet, and a seat proximate the outlet and cooperating with a closure member to permit and prevent a flow of fuel through the passage, the orifice plate comprising:

a member including first and second generally parallel surfaces, the first surface being adapted to generally confront the valve seat, and the second surface facing opposite the first surface; and

an orifice, having longitudinal axis, penetrating the member and being defined by a wall coupling the first and second surfaces, the wall including:

a first portion extending from the first surface, the first portion of the wall extending at a first oblique angle with respect to the first surface, the first oblique angle defining a an asymmetrical chamfer asymmetrical about the longitudinal axis of the orifice; and

a second portion extending between the first portion and the second surface, the second portion of the wall being in direct communication with the first portion and defining a cylinder extending along an axis at a second oblique angle with respect to the second surface, such that fuel which enters the first portion at the first surface can flow through the first portion directly into the second portion and exit the second portion at the second surface,

a perimeter being defined by the cylinder as an abutment of the first and second portions, the perimeter lying in a plane that is oblique with respect to the first surface.

8. (Canceled)

9. (Previously Presented) The orifice plate according to claim 7, wherein at least a portion of the perimeter is contiguous with the first surface.

10. (Previously Presented) The orifice plate according to claim 7, wherein the first oblique angle is within a range of oblique angles with respect to the orifice axis.

11. (Canceled)

12. (Previously Presented) The orifice plate according to claim 10, wherein the first oblique angle is in a first range between 25 to 30 degrees relative to the longitudinal axis, and the second oblique angle is in a second range between 3 and 10 degrees relative to the longitudinal axis.

13-25 (Canceled)